

REMARKS

Claims 1, 3-13 and 15-20 are pending in this application. By this Amendment, claims 1, 13 and 19 are amended. The amendments introduce no new matter. Claims 2 and 14 are canceled without prejudice to, or disclaimer of, the subject matter recited in those claims. A Request for Continued Examination is attached. Reconsideration of the application based on the above amendments and the following remarks is respectfully requested.

A Final Rejection was mailed on December 2, 2005. Applicants filed a Request for Reconsideration After Final Rejection on February 2, 2006. An Advisory Action was mailed on February 22, 2006 indicating that the Request for Reconsideration After Final Rejection was not considered to place the application in condition for allowance. Specifically, the arguments raised in the February 2 Request for Consideration After Final Rejection were considered by the Examiner not to be persuasive. On March 13, 2006, Applicants timely filed a Notice of Appeal, Petition for Extension of Time and Pre-Appeal Brief Request for Review. A Notice of Panel Decision from Pre-Appeal Brief Review was mailed on June 19, 2006 indicating that there is at least one actual issue for Appeal. Claims 1-20 remain rejected and Applicants were advised that the application remained under Appeal. In reply, Applicants respectfully submit this response.

The Office Action, on page 2, rejects claims 1-20 under 35 U.S.C. §103(a) as being obvious over U.S. Patent No. 6,560,115 to Wakabayashi et al. (hereinafter "Wakabayashi"). This rejection is respectfully traversed.

Wakabayashi teaches an electronic control unit for mounting on a vehicle including a control portion and a power portion which are separate from each other, and are combined together (Abstract). With reference to all of the figures of Wakabayashi, the Office Action maps features disclosed in that reference to features positively recited in the claims.

Wakabayashi is alleged to teach a heat radiating member 60 including a circuit arrangement

surface having a circuit arrangement region 61; a power circuit section 33 including at least one electronic part and arranged in the circuit arrangement region 57, 58, 100; a wall member 54 surrounding the circuit arrangement region; and a resin layer 102 (see *e.g.*, Fig. 2B of Wakabayashi).

Claim 1 recites a power module, comprising a heat radiating member, one surface of the heat radiating member being a circuit arrangement surface having a circuit arrangement region, the circuit arrangement region being a predetermined region of the circuit arrangement surface of the heat radiating member; a power circuit section including at least one electronic part, the entire power circuit section being arranged in the circuit arrangement region of the circuit arrangement surface of the heat radiating member; a wall member formed surrounding the circuit arrangement region, the wall member and the heat radiating member forming a unitary space, the heat radiating member being a bottom of the space, for accepting a waterproofing resin, and the wall member comprising a groove in an edge facing the heat radiating member; a seal member disposed in the groove such that the seal member temporarily prevents the waterproofing resin from being leaked from the surrounding wall; and a resin layer disposed in the space defined by the wall member and the heat radiating member, wherein the electronic part has a plurality of leg portions, and the resin layer seals at least the leg portions. Independent claims 13 and 19 recite similar features.

Wakabayashi is structured in a manner discussed as conventionally existing in the prior art under Applicants' Description of Related Art at least at page 1, line 15 - page 2, line 1. The shortfalls of the configuration of Wakabayashi are discussed further in the Background portion of Applicants' disclosure. The subject matter of the pending claims is intended, among other objectives, to overcome the identified shortfalls discussed on pages 1 and 2 of Applicants' disclosure. The claimed structure results in a more compact formation of a power module that addresses the disclosed objectives.

The structure of Wakabayashi cannot reasonably be considered to teach, or even to have suggested, at least the feature one surface of the heat radiating member being a circuit arrangement surface having a circuit arrangement region, the circuit arrangement region being a predetermined region of the circuit arrangement surface of the heat radiating member; a power circuit section including at least one electronic part, the entire power circuit section being arranged in the circuit arrangement region of the circuit arrangement surface of the heat radiating member; a wall member formed surrounding the circuit arrangement region, the wall member and the heat radiating member forming a unitary space, the heat radiating member being a bottom of the space, for accepting a waterproofing resin, and the wall member comprising a groove in an edge facing the heat radiating member; a seal member disposed in the groove such that the seal member temporarily prevents the waterproofing resin from being leaked from the surrounding wall; and a resin layer disposed in the space defined by the wall member and the heat radiating member.

For example, Wakabayashi positively recites that the power portion 33 comprises the power connector-incorporating casing (power casing) 54 which serves as a base portion for this power portion (col. 9, lines 43-45). Power parts 57 and 58 are mounted within the power connector-incorporating casing (col. 9, lines 61 and 62). A heatsink 60 is mounted on an underside of the power connector-incorporating casing, the heatsink including semiconductor power module 61 mounted on a surface of the heatsink with parts (portions) of busbars in the power connector-incorporating casing 54 being exposed for connecting to the power modules, the power connector-incorporating casing 54 and the heatsink 60 being bonded together by a resin adhesive (col. 10, lines 15-31). This detailed description of the structure found in Wakabayashi differs markedly from that recited in the pending claims, particularly regarding the heat radiating member forming a bottom of the space for accepting a waterproofing resin, and the entire power circuit section being arranged in the circuit arrangement region of the

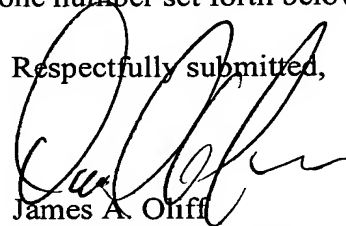
circuit arrangement surface of the heat radiating member. The very detailed description of the construction of the multi-portion power circuit section of Wakabayashi cannot reasonably be considered to teach, or even to have suggested, all of the detailed features as positively recited in at least independent claims 1, 13 and 19. Further, claims 3-12, 15-18 and 20 are also neither taught, nor would they have been suggested, by Wakabayashi for at least the respective dependence of these claims directly or indirectly on allowable independent claims, as well as for the separately patentable subject matter that each of these claims recites.

Accordingly, reconsideration and withdrawal of the rejection of claims 1, 3-13 and 15-20 under 35 U.S.C. §103(a) as being obvious over Wakabayashi are respectfully requested.

In view of the foregoing, Applicants respectfully submit that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1, 3-13 and 15-20 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact Applicants' undersigned representative at the telephone number set forth below.

Respectfully submitted,



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Attachment:
Request for Continued Examination

Date: July 19, 2006

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